Audio Note

M5 Phono

PRE AMPLIFIER

OWNER'S INFORMATION

Audio Note

CONTENTS

1) IMPORTANT SAFETY INFORMATION

2) CE DECLARATION OF CONFORMITY
DISPOSAL
POWER REQUIREMENTS

3) INTRODUCTION

4) OVERVIEW
UNPACKING AND INSTALLATION

5) CONNECTION

6) OPERATION

7) TECHNICAL SPECIFICATIONS

8) WARRANTY INFORMATION

9) CONTACT INFORMATION

! IMPORTANT SAFETY INFORMATION !

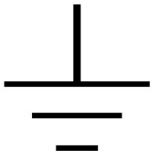
RISK OF SHOCK OR ELECTROCUTION! INTERNAL OPERATING VOLTAGES ARE LETHAL!

Do not remove top cover, unless specifically instructed to do so in the user manual.

This unit contains fuses and other safety components in accordance with BS60065 requirements.
In the event of failure, replacement fuse or safety component must be of the same part type and value.

SUCH REPLACEMENT MUST ONLY BE CARRIED OUT BY A QUALIFIED SERVICE TECHNICIAN.

Do not attempt to replace any fuses without first disconnecting the unit from the mains electricity supply.



This product must be earthed – ensure that the mains supply cable earth / ground is correctly connected.

This product generates high levels of heat. Adequate ventilation must be provided. Do not restrict airflow through any ventilation slots or place the unit on any surface that may restrict airflow.

Valve equipment operates at extremely high temperatures;
KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

Do not store or operate this unit in areas of high humidity or in close proximity to water / moisture.

Do not expose or immerse the unit in liquid of any kind.

OTHER SAFETY PRECAUTIONS: -

Never touch the power cord with wet hands.

Always remove the power cord by grasping the plug, not the cable.

Never expose the unit to excessive heat or magnetism.

Never let an inexperienced person repair or reassemble the unit.

Never put anything, especially metal objects, inside the unit.

Never place excessive weight on the unit.

CE DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in conformity with the following standards or standardized documents:

BS EN 60065 in accordance with the regulations 73/23/EEC, 89/336/EEC (from 1 January 1997)

CE 94

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DISPOSAL

This product must not be disposed of as normal household waste. To prevent possible harm to the environment please separate the product from other waste to ensure that it can be recycled in an environmentally safe manner. Please contact your retailer or the appropriate local government office for collection facilities.

POWER REQUIREMENTS

Power requirements for electrical equipment vary depending on your geographical location. Please ensure that your unit meets the power requirements in your area. The power requirement for your unit is marked on the serial number plate, located on the rear panel.

If you are in doubt, please contact your dealer before plugging the unit into the mains supply.

INTRODUCTION

Thank you for purchasing this Audio Note (UK) product. With the correct care it should give you many years of pleasure and enjoyment.

Please take the time to read all of the information in this manual before connecting your new component to an electrical supply or your system, to ensure both your safety and satisfaction.

Please note that due to our desire to continually improve products, specifications are subject to change without notice. Therefore it is important to refer to the manual that is supplied with your product for the most accurate information; manuals downloaded from our website or obtained from other sources may no longer fully apply to your product.

If you have any questions regarding the information contained within this document or your new component, please feel free to contact us: -

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Audio Note

M5 PHONO PRE AMPLIFIER

Congratulations on your purchase of the Audio Note (UK) M5 Phono Pre Amplifier.

It has been specifically engineered for sonic performance rather than technical specification, and fulfills all Audio Note (UK) Level 3 criteria: -

Pure Class A operation
Zero negative feedback
Single Ended circuit topology
Valve rectification
Materials and component quality

It is well known that the accurate reproduction of music, not just sound, requires the purity of the incoming signal to be preserved. It is therefore not difficult to conclude that, in order to achieve this goal and to retain the musicality of the original performance, the complexity of the circuitry itself must be kept to a minimum.
In response to this, the M5 phono Pre Amplifier uses a single-ended, zero feedback circuit topology. This is simply the most linear design possible, demanding pure Class A valve operation and removing the need for a phase splitter, which introduces unnecessary crossover distortion.

In contrast to the majority of the audio industry, we design our circuits with the aim of minimizing non-harmonic and time base anomalies, rather than producing vanishingly small harmonic or low intermodulation distortion measurements. These non-harmonic amplitude and time base distortions have a highly perceptible and adverse affect on the signal waveform, and it is far more important to address these factors than participate in the increasingly irrelevant numbers game that chases ‘perfect measured response’.
As a result, the M5 Phono was designed for maximum linearity and minimum transient distortion, and avoids the need for detrimental ‘corrective’ measures, such as inherently error-prone feedback loops.

The M5 Phono Pre Amplifier features an ECC82 and 5687 line stage, and uses a 6X5 valve rectified power supply based on the M10’s Galahad PSU. This power supply also incorporates an ECL82 for voltage regulation and an OB2 as a voltage stabilizer. Audio Note (UK) Copper wiring, tantalum resistors, SILMIC capacitors and Audio Note (UK) copper foil signal capacitors are used throughout the circuit, along with in-house designed and manufactured, custom Audio Note (UK) output transformers which feature IHiB c-cores and copper windings. The M5 Phono also has a correctly designed and implemented balanced output circuit.

Additionally, it incorporates an exceptionally fine Moving Magnet phonostage which uses three GE 6072a / 12AY7 valves, Audio Note (UK) copper foil signal capacitors and its own dedicated, valve regulated and rectified power supply.

Rather than using separate controls for volume and balance, the M5 Phono is equipped with a dedicated Audio Note (UK) stepped attenuator for each channel. This not only brings the enormous improvements in sound quality expected from the now legendary Audio Note (UK) stepped attenuators, but also provides a level of channel balance accuracy that is impossible to achieve with conventional volume and balance potentiometers.

UNPACKING AND INSTALLATION

Please take care when unpacking your M5 Phono Pre Amplifier. Choose a clean, clear location to unpack your unit. Be aware that the amplifier is very heavy; before attempting to unpack or lift the unit, check the weight and if necessary use more than one person so that it can be moved safely and easily.

We recommend that you retain and carefully store all of the original packing materials, in case transportation / shipping is required at a later date.

Select a suitable location for the unit. This should be a dry, dust free and level area, preferably shielded from direct sunlight and free from vibration. Also ensure that the location is stable and capable of carrying the weight of the unit.

A suitable mains power outlet must be close to the location; power cords must not be pulled or stretched tightly in an attempt to reach a wall socket. If the power cord will not easily reach the socket, choose a closer location!

Please ensure that adequate ventilation for the unit is provided, and that airflow through any ventilation slots in the unit is not restricted. We recommend a distance of at least 20cm free space is maintained above the unit. Please also remember that valve equipment operates at extremely high temperatures, so a position that is inaccessible to any children or animals is essential.

CONNECTION

Line inputs Three RCA / Single Ended line inputs are available for connection, labeled ‘Tuner’ ‘Aux’ and ‘CD’; any standard ‘line level’ source can be connected to these inputs.
All sockets are colour coded; RED is for RIGHT channel connection, WHITE is for LEFT channel connection.

Phono input The M5 Phono is equipped with a high quality, valve, Moving Magnet (MM) phonostage. Connect the cables from your tonearm to the ‘Phono’ socket inputs. If your Turn Table is equipped with a separate earth wire, connect this to the dedicated grounding / earth post, located next to the ‘Phono’ input sockets.
If you wish to use a low output Moving Coil (MC) cartridge, Audio Note (UK) manufactures a series of Step Up Transformers for this purpose. For further information, please contact your Audio Note (UK) Dealer, or alternatively please contact us direct.

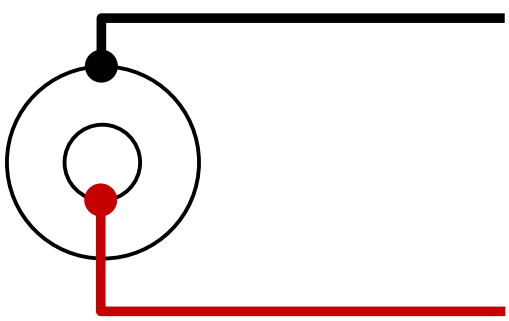
Mains The M5 Phono is equipped with an IEC 320 mains inlet socket. Use the supplied mains cable to connect the unit to the local mains supply. The mains fuse and a spare is located in the inlet socket fuse drawer.

Special Note – Make sure that all connections are tight and clean. For best results use good quality audio interconnects. Although it is perfectly acceptable to use cables manufactured by other companies, for best results and performance, we recommend our own Audio Note (UK) range of interconnects and loudspeaker cables. For further information, please consult your nearest Audio Note (UK) dealer, or alternatively please feel free to contact us directly.

Ground Post A ground post is provided for connection to those source components that also use a separate ground terminal.

Outputs **Outputs** The M5 Phono provides two unbalanced outputs, consisting of two pairs of colour coded RCA / Single Ended sockets. RED is for RIGHT channel connection, WHITE is for LEFT channel connection.
There is also a balanced output, consisting of a pair of ‘male’ XLR sockets (see ‘Balanced’ section, below).

RCA The two pairs of RCA / Single Ended outputs are for connection to a power amplifier and are identical, making them suitable for bi-amping.

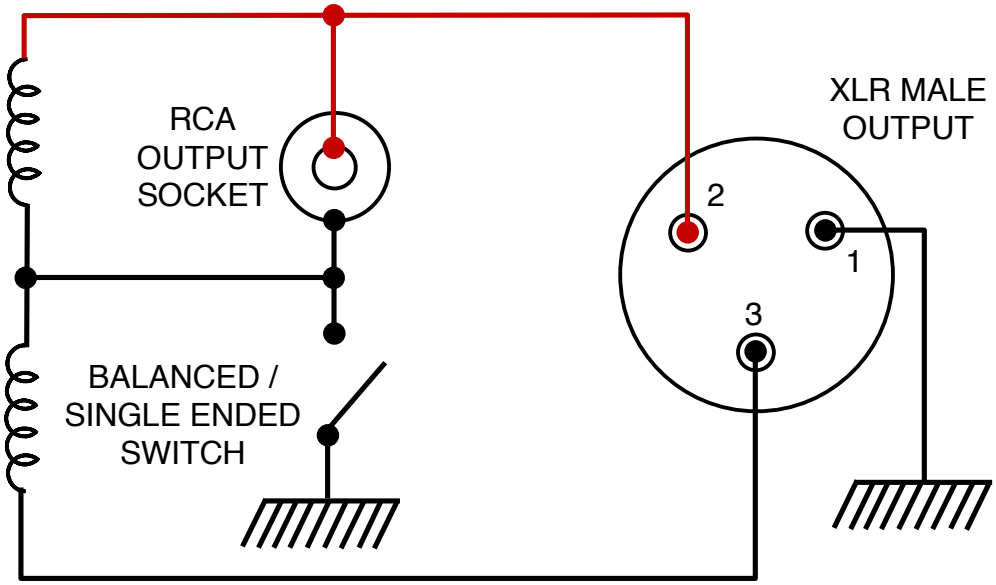


RCA SOCKET,
SHELL = NEGATIVE / RETURN.

RCA SOCKET,
CENTRE = POSITIVE / SEND.

CONNECTION continued…

Balanced The M5 Phono is equipped with custom designed and manufactured output transformers, which employ an improved output and grounding scheme to provide the best possible connection to the power amplifier. Below is a description of the various cable and connection options: -



The pin configuration for all Audio Note (UK)
XLR / BALANCED connections is as follows: -

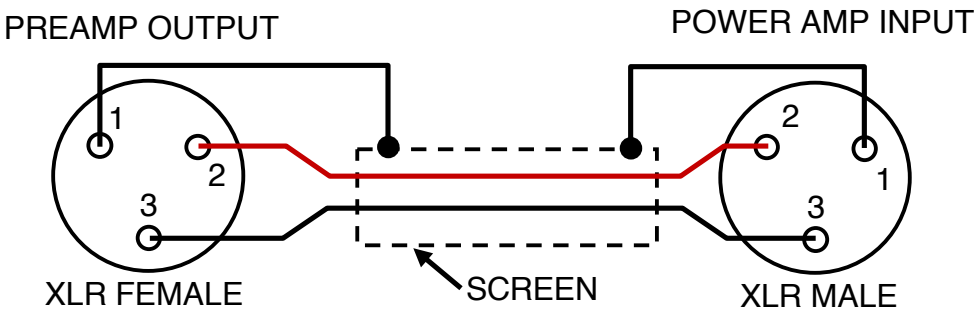
PIN 1	Ground / Shield
PIN 2	Positive / Send
PIN 3	Negative / Return

The balanced and unbalanced outputs cannot be used simultaneously; select the appropriate output using the toggle switch.

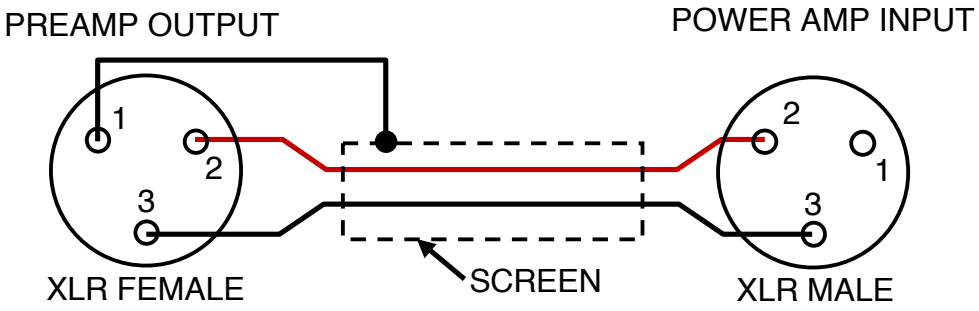
When using an amplifier with a true balanced input, the 'BALANCED / SINGLE ENDED' switch may be set in either position. When set to the 'BALANCED' position, the centre tap of the output transformer secondary is connected to the preamplifier's ground. When set in the 'SINGLE ENDED' (unbalanced) position, the secondary 'floats' in relation to the preamplifier ground. This provides the option of either a low or high common mode impedance to ground at the preamplifier output. Experiment with both positions to achieve the lowest background hum from the system.

CONNECTION continued…

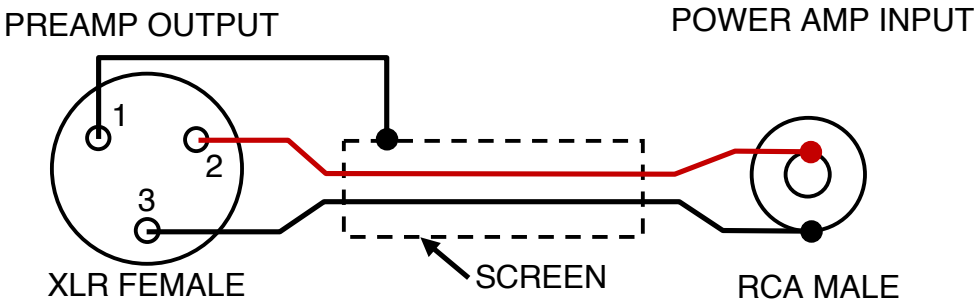
CABLE CONFIGURATION OPTIONS



CONVENTIONAL: SCREEN CONNECTED AT BOTH ENDS



SCREEN CONNECTED AT PREAMP END ONLY, TO ELIMINATE GROUND LOOPS



CABLE CONFIGURATION FOR XLR BALANCED PREAMP OUTPUT TO RCA UNBALANCED AMPLIFIER INPUT

*When connecting the **XLR / BALANCED** outputs to an amplifier with an RCA / Single Ended input, the switch must be set to the **'SINGLE ENDED'** position.*

OPERATION

Once all the connections are completed and checked, ensure that the volume control is at the minimum setting (rotated all the way left).

Ensure that all source components connected to the M5 Phono Pre Amplifier are switched ON. Source components should always be the **FIRST** components to be switched on and the **LAST** components to be switched off.

Ensure that all power amplifiers connected to the M5 Phono Pre Amplifier are switched OFF. Any power amplifiers in use should be the **LAST** components to be switched on, and the **FIRST** components to be switched off.

The above procedure minimizes the possibility of loud noises produced by components at switch on being passed to the loudspeakers and possibly causing damage.

Turn on the M5 Phono by using the rocker switch located on the rear panel, above the mains inlet IEC socket.

The M5 Phono requires approximately 45 seconds to initialize before it is ready for operation.

Input Selector Turn the selector to the source you wish to listen to.

Volume Controls There are two separate volume controls, one dedicated to each channel. For a correctly produced Stereo or Mono recording, adjust both channels to the same level. If it is necessary to equalize the relative levels for each channel, adjust the controls separately to achieve the desired balance.

OPERATION continued…

Bedding in

The M5 Phono requires approximately 200 hours of initial use (called “bedding in”) before the circuitry becomes stable and optimum performance is realized.
As the amplifier “beds in” the sound will become increasingly smoother, detailed and open.
Once the amplifier has “bedded in” a warm up time of approximately 30 to 45 minutes is required each time the amplifier is switched on before optimum sonic performance is reached.

Cleaning

No special maintenance is required for the amplifier. Use a soft, clean lint free cloth to remove any surface marks from the casework. For finger marks / grease, use a soft, clean lint free cloth, lightly moistened with a solution of warm water and mild detergent. Do not use any alcohol or solvent based cleaning products, as they may damage the finish of the amplifier.

ENSURE THAT THE AMPLIFIER IS SWITCHED OFF AND DISCONNECTED FROM THE MAINS ELECTRICITY SUPPLY BEFORE UNDERTAKING ANY CLEANING.

Valve Life

The valves supplied with your M5 Phono Pre Amplifier should provide approximately 5 years of operation. They are specially selected by us, and should only be replaced with valves of the same type and specification. Please consult your Audio Note (UK) dealer should your valves need replacing. Alternatively, feel free to contact us directly.

TECHNICAL SPECIFICATIONS

INPUT IMPEDANCE	100 KOhm Line Level 47KOhm, phono
INPUT SENSITIVITY	126mV for 1V Output, Line Level
GAIN @ 1KHz	15dB Line Level 63dB Phono
OUTPUT IMPEDANCE	<10 Ohms
OUTPUT NOISE (RMS)	<0.1mV unweighted, Line Level <15mV unweighted, Phono
TUBE COMPLIMENT	1 x ECC82 1 x 5687 2 x 6X5 2 x ECL82 2 x OB2 3 x 6072a
FUSE RATINGS	1.6A anti-surge (110 / 120V supply) 800mA anti-surge (220 / 240V supply)
MAX. POWER CONSUMPTION	81 Watts
UNIT WEIGHT	16 KG
SHIPPING WEIGHT (ORIGINAL PACKAGING)	19 KG
UNIT DIMENSIONS	135mm (h) x 440mm (w) x 410mm (d)
SHIPPING DIMENSIONS (ORIGINAL PACKAGING)	235mm (h) x 540mm (w) x 510mm (d)
NOTE	Due to Audio Note (UK)'s ongoing research and development program, specifications are subject to change without notice.

WARRANTY INFORMATION

Audio Note (UK) warrants this product to be free from defects in materials and workmanship for two years from the original date of purchase from an appointed Audio Note (UK) dealer, and agrees to cover the cost of parts and associated labour required to correct such defects, subject to terms & conditions.

This Warranty is offered to the first purchaser only.

Any valves supplied with the unit are warranted for three months from the original date of purchase.

If the product fails in normal domestic use and during the Warranty period due to the above described faults or defects, Audio Note (UK) will, at its discretion, repair or replace the item free of charge within a reasonable time once it has been returned to Audio Note (UK) or an appointed Audio Note (UK) dealer or service engineer.

Audio Note (UK) is not liable for any shipping charges incurred whilst transporting the product to or from Audio Note (UK) or an appointed Audio Note (UK) dealer or service engineer, should the item require service or repair during or after the Warranty period.

If the product must be shipped, please use the original packaging materials and include a copy of the original sales receipt along with a note explaining, in as much detail as possible, the problems you are experiencing with the unit.

Only use a reputable Courier Service or Shipping Agent, and ensure that your product is insured during transit.

Any servicing, repairs or modifications not authorized by Audio Note (UK), or carried out by persons other than appointed Audio Note (UK) service engineers will invalidate any warranty.

This Warranty does NOT cover: -

Damage sustained whilst in the possession of a shipping agent, retailer or consumer and not caused as a direct result of defects in materials or workmanship.

Damage caused by normal wear and tear.

Damage or defects caused by abnormal or unreasonable use.

Damage caused by accident, acts of nature, misuse or neglect.

Damage caused by a failure to follow the operating and installation instructions supplied with the product.

Damage caused by improper or careless cleaning.

Audio Note (UK) reserves the right to refuse warranty for any component of which the serial number has been removed, defaced or tampered with.

CONTACT INFORMATION

If in the future your Audio Note (UK) product requires servicing, or if you require technical support or have any questions regarding this or any of our other products, please contact your local Audio Note (UK) dealer.

Alternatively, please feel free to contact us directly: -

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